



Charles County Department of Emergency Services STANDARD OPERATING PROCEDURES

Section 300 - Employee Health & Safety

Health & Wellness Programs - 300.00		
S.O.P. # 300.07	Parasite Prevention, Procedures & Reporting	PAGE: 1 OF 10
Effective: 10/16/2018	Authorized: John Filer, Chief	
Revised: 01/23/2020	Authorized: William Stephens, Director	
This SOP was submitted and approved through the SOP Workgroup.		

300.07.01 Purpose

This policy is intended to provide guidance to all uniformed field personnel regarding the detection, prevention measures, and appropriate actions to take when parasites are encountered or suspected on emergency incidents or in Fire/Rescue facilities.

300.07.02 Definitions

1. **Bed Linen** - For the purpose of this SOP, bed linen is defined as any piece of garment used by personnel to make their bed. Such items include sheets, blankets, pillows, and pillowcases.
2. **Parasite** - Any organism that lives in or on another organism without benefiting the host organism; to include bed bugs, body lice, head lice, mites, and scabies.
3. **Uniform** - For the purpose of this SOP, a uniform means any item personnel are required to wear during the performance of their duties.

300.07.03 Applicability

All career personnel.

300.07.04 General

Personnel may come in to contact with parasites from a variety of sources. Once an infestation has occurred, parasites can be extremely difficult to eradicate.

1. **Bed Bugs** are small, flat, parasitic insects that feed solely on the blood of people and animals while they sleep. Bed bugs are reddish-brown in color, wingless, range from 1mm to 7mm (roughly the size of Lincoln's head on a penny) and can live several months without a blood meal. Bed Bugs are a nuisance pest that feed off the blood of animals and humans. Bites can cause itching and interfere with sleep but currently bed bugs are not considered a medical or public health hazard because they are not known to spread disease.



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Figure 1: Bed Bug

- Head Lice** infest the head and neck and attach their eggs to the base of the hair shaft. Lice move by crawling; they cannot hop or fly. Head lice infestation is spread most commonly by direct head-to-head (hair-to-hair) contact. However, much less frequently they are spread by sharing clothing or belongings onto shed hair which lice have crawled or nits have attached. The risk of getting infested by a louse that has fallen onto a carpet or furniture is very small. Head lice survive less than 1-2 days if they fall off a person and cannot feed; nits cannot hatch and usually die within a week if they are not kept at the same temperature as that found close to the scalp. Dogs, cats, and other pets do not play a role in the transmission of human lice. Both over the counter and prescription medications are available for treatment of head lice infestations.



Figure 2: Head Lice

- Body Lice** infestations are spread most commonly by close person-to-person contact but are generally limited to persons who live under conditions of crowding and poor hygiene (for example, the homeless, refugees, etc.). Body lice are known to spread disease. Dogs, cats, and other pets do not play a role in the transmission of human lice. Improved hygiene and access to regular changes of clean clothes is the only treatment needed for body lice infestations.



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Figure 3: Body Lice

4. **Chiggers** are so small you need a magnifying glass to spot them. They aren't dangerous, but their bites can leave you with a powerful urge to scratch. They have several nicknames including harvest mites, harvest bugs, harvest lice, mower's mites, or red bugs. Their favorite spots are moist, grassy areas like fields, forests, or even your lawn. You can also find them near lakes and streams. Adult chiggers don't bite. It's the babies, called larvae, that cause the discomfort. They can be red, orange, yellow, or straw-colored, and no more than 0.3 millimeters long. After they hatch from eggs, the babies do not fly, nor do they travel very far on their own. They tend to stay clumped together in large groups on leaves and grass, usually less than a foot off the ground, and attach to animals or people as they pass by. Chigger bites are most common in the late spring, summer, and early fall. Chiggers will die when it gets colder than 42°F. Chigger bites can happen anywhere on your body, but they often show up in clusters around the waist or lower legs. You will not feel the initial bites but in a few hours, you will most likely begin to itch. The itching usually lasts for several days and can sometimes keep you awake at night. You may also notice that your skin turns red and you will develop bumps, blisters or a hive-like rash that may take a week or two to heal. Chiggers don't spread disease, but scratching could break the skin and lead to irritation or an infection.



Figure 4: Chigger



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5. **Scabies** is caused by an infestation of the skin by the human itch mite. The microscopic scabies mite burrows into the upper layer of the skin where it lives and lays its eggs. The most common symptoms of scabies are intense itching and a pimple-like skin rash. The scabies mite usually is spread by direct, prolonged skin-to-skin contact with a person who has scabies. Scabies occurs worldwide and affects people of all races and social classes. Scabies can spread rapidly under crowded conditions where close body contact is frequent. Institutions such as nursing homes, extended-care facilities, and prisons are often sites of scabies outbreaks. Scabies is prevented by avoiding direct skin-to-skin contact with an infested person or with items such as clothing or bedding used by an infested person. Scabies treatment usually is recommended for members of the same household, particularly for those who have had prolonged skin-to-skin contact. All household members and other potentially exposed persons should be treated at the same time as the infested person to prevent possible re-exposure and re-infestation. Bedding and clothing worn or used next to the skin anytime during the 3 days before treatment should be machine washed and dried using the hot water and hot dryer cycles or be dry-cleaned. Items that cannot be dry-cleaned or laundered can be disinfested by storing in a closed plastic bag for several days to a week. Scabies mites generally do not survive more than 2 to 3 days away from human skin. Children and adults usually can return to childcare, school, or work the day after treatment.



Figure 5: Scabies

300.07.05 Policy

All personnel should be knowledgeable in identifying parasites and evidence of infestations, the notifications that are to be made after a suspected encounter, and the actions to be taken to help prevent the spread of parasites. Preventive measures taken during a known or suspected parasite exposure can keep stations and personnel protected and reduce the chance of a parasite infestation.



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300.07.06.1 Procedure

1. Lice (Body & Head)

- a. Notify supervisor or station officer,
- b. Personnel with a confirmed case of any above noted lice will be relieved of their duties until they are found to no longer be contaminated;
- c. Personnel will have a medical professional perform an exam to confirm that they are free from the presence of lice.

2. Mites: Chiggers & Scabies

a. Chiggers

- i. Notify supervisor or station officer,
- ii. As soon as possible, remove all clothing and shower in hot water and scrub skin using dish soap until it appears that all chiggers have been removed;
- iii. Place all uniform items in hot water and wash with hot water and dry with high heat;
- iv. Seek medical attention if necessary.

b. Scabies

- i. Document exposure immediately. Scabies can take up to six (6) weeks for symptoms to manifest. A First Report of Injury must be completed for anyone having direct skin to skin contact with a person having scabies.
- ii. If someone suspects they have scabies, they should be evaluated in accordance with the County's Infection Control Plan.
- iii. All members of the station or anyone in contact on the call must be notified and possibly treated. Medical treatment/assessment is necessary for all confirmed cases of scabies.
- iv. All bedding and uniforms must be washed in hot water and dried on high heat or stored in a black plastic trash bag and sealed for at least one (1) week.
- v. Any non-washable items can be decontaminated by removing from body contact for at least seventy-two (72) hours.
- vi. For a confirmed case of scabies, the health department must be contacted, and a report must be completed.



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3. Bed Bugs - At an Incident Scene

- a. If bed bugs are suspected or observed, limit the number of personnel entering the affected area to only those necessary for effective patient care.
- b. Immediate notification shall be made to the On-Duty Medical Duty Officer (MDO) (and if applicable Volunteer Station Chief Officer). The MDO will meet with the crew at the conclusion of the incident to evaluate and coordinate actions that may be needed.
- c. Personnel should tuck pant legs into boots to minimize loose fabric from brushing against surfaces.
- d. Bags and equipment brought into the infested area should be kept to a minimum and if possible, only be placed on hard surfaces away from beds or sleeping areas, and not on carpets, beds, or sofas.
- e. Clinicians should avoid sitting or kneeling on soft surfaces (such as carpets, bed, sofas, etc.).
- f. If a patient is being transported from a residence with suspected / observed bed bugs, the stretcher should be prepared with additional sheets / blankets prior to the patient sitting down. The patient should be wrapped with sheets / blankets when possible to prevent inadvertent contact with clothing. Any belongings transported with the patient should be placed in a plastic bag prior to being placed on the ambulance.
- g. Upon exiting the residence, crew members should have their clothing, especially boots, pant legs and sleeves sprayed with 91% Isopropyl alcohol unless emergency medical patient care prohibits a delay.
 - i. ****CAUTION - 91% Isopropyl alcohol is flammable and should not be used near any heat sources or open flame. Use in well ventilated area and avoid contact with face / eyes.
 - ii. Use respiratory precautions and avoid inhaling fumes.
- h. Ambulance crews shall notify the receiving facility of suspected / observed bed bugs via EMRC prior to entering the facility. EMS crews shall follow pre-arrival instructions provided by the receiving facility.
- i. Apparatus Decontamination:
 - i. Decontamination should start as soon as possible while limiting potential cross contamination.



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- ii. Non-transport units should begin decontamination prior to leaving the scene and transport units should begin decontamination as soon as patient turnover is complete. Notification should be made to the appropriate supervisor. The unit and crew are placed out of service until decontamination is complete.
- iii. Inspect and wipe down all suspected hard surfaces of the apparatus with a 91% alcohol solution. All gear bags and equipment utilized on the incident should be sprayed with this solution and wiped clean. For non-transport units, this should occur prior to placing equipment/bags back on the unit.
- iv. Place all contaminated linen in a biohazard bag and place at the area designated by ER staff.

j. Post-Call Personnel Decontamination:

- i. Personnel are to remain out of service until properly decontaminated, showered and a fresh uniform is put on.
- ii. Staff shall not enter living / sleeping quarters, carpeted areas or sit on any furniture in the facility until decontamination is complete.
- iii. Once at the station, personnel will remove their contaminated uniforms in the decontamination room if available or restroom (with a shower) closest to the apparatus bay.
- iv. Contaminated uniforms should be doffed and sealed tightly in a plastic bag until they can be put into a dryer on the highest heat setting for thirty (30) minutes.
- v. Once the uniforms have completed the thirty (30) minute drying cycle, they can be laundered normally.
- vi. If personnel are located at a facility without a working washer and dryer, they shall immediately bag their exposed uniform and take it to the most appropriate facility with laundry resources.

4. Bed Bugs - Within Fire & Rescue Facilities

- a. When it is suspected that bed bugs have been found within Fire / Rescue facilities, the station's chain of command shall be immediately notified.
- b. Notification shall be made to the MDO who shall be responsible to immediately inspect the location with station leadership. Notification should then be made to the Career EMS Operations Chief along with volunteer leadership of the affected station with findings and recommendations.
- c. Bedding, clothing and equipment may not be moved from the potentially infested area to any other areas within the station or to other stations or vehicles.
- d. Any time bed bugs are suspected in Fire / Rescue facilities, a certified pest control company will be contacted by the Station or DES leadership to evaluate.



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- e. When the presence of bed bugs has been confirmed, the following actions shall be taken to prevent the spread of bed bugs to other areas of the station or other facilities:
 - i. All linens and bedding shall be removed from beds and placed in sealed plastic bags until properly decontaminated or disposed of with the owner's permission. Items shall be placed in the dryer at the highest heat setting for thirty (30) minutes. Items that cannot be laundered shall be decontaminated with a ninety-one percent (91%) alcohol solution.
 - ii. Mattress encasements **shall not** be removed when it is confirmed that bed bugs are present. They should be cleaned in place. If encasements are ripped or damaged and need to be replaced, then do so after cleaning. The old encasement should be placed in a plastic bag and disposed of outside the station.
 - iii. Personnel will remove uniforms and place them in a dryer on the highest setting for thirty (30) minutes. Please note: Once uniforms have completed the thirty (30) minute drying cycle, they can then be laundered normally. If personnel are located at a station without a dryer, they shall immediately bag their exposed uniform. It can then be taken to another Fire / Rescue facility with a dryer.
 - iv. Footwear can be cleaned with a ninety-one percent (91%) Isopropyl alcohol solution.
- f. Personnel assigned to the affected station shall be notified immediately by memo of the findings. This notification is meant to alert the absent member that they will need to decontaminate linens and other personal items in the manner detailed above upon their return to duty.
- g. The eradication of a bed bug infestation will be conducted by an appropriately qualified pest control company.
- h. Additional Best Practice Measures:
 - i. For easier identification of infestations, it is recommended that personal linens utilized at Fire / Rescue facilities shall be white, off-white or a light pastel color. Dark colors or patterns make it more difficult for staff to identify bed bugs or evidence of bed bugs on linens
 - ii. The use of metal bedframes, metal nightstands/furniture and metal lockers are suggested.
 - iii. Bunkrooms and living areas shall be kept uncluttered. A locker should be supplied for the purpose of storing linens and toiletries. Soiled items, food, and excessive clutter should not be stored in lockers.
 - iv. Personnel will keep a spare uniform in their vehicle or station locker at all times. If personnel utilize lockers for spare uniforms or clothing items, they should be sealed in plastic bags.



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- v. Personnel are encouraged to shower and change out of work uniforms at the end of their shift.
 - vi. Bed linens shall be removed from the beds after each shift and stored appropriately. Personnel shall ensure pillows are encased. Mattress pads are not authorized unless sealed in an undamaged impervious cover.
 - vii. All mattresses and box springs should be encased in a parasite resistant mattress cover. This mattress cover should remain on the mattress at all times unless removed for washing.
 - viii. No personal items, linens, clothing, bags, pillows, etc. shall be left out in bunk rooms or living areas. Any personal items left in common areas are subject to being discarded during daily cleaning.
 - ix. Gear bags, equipment bags and other related items used to provide patient care and have the potential of contact with parasites shall not be stored or brought into the bunkroom or living areas.
 - x. When practical, personnel shall place bed linens in a dryer for thirty (30) minutes on high heat prior to transporting linens to another station. This practice will reduce the unnecessary spread of parasites from one location to the next.
 - xi. Volunteer Station Officers and MDO's should inspect bunkrooms, bathrooms, offices and lounge areas on a weekly basis to ensure conformance to this SOP.
- i. Post-Incident Action Items, Documentation & Notifications
- i. Affected Personnel
 - A written Incident Report shall be submitted to the MDO documenting the incident, circumstances, actions taken and the degree of contact and exposure.
 - ii. Medical Duty Officer
 - Report to the Incident location.
 - Determine the nature of the incident and actions needing to be taken to mitigate the incident. Supply on-scene personnel with a "Bed Bug Response Kit" as needed.
 - Kit includes:
 - 91% Isopropyl Alcohol Solution
 - Sprayers for Alcohol Solution
 - Tyvek Level C Suits with Booties
 - APR with P100 filter
 - Large Plastic Bags



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- Coordinate with receiving hospital facility if a patient is to be transported.
- Ensure that personnel and equipment are properly decontaminated before returning to service to prevent cross contamination.
- Notify EMS Operations Chief and the station leadership of the incident.
- Submit a written report of the Incident via email prior to the end of the shift detailing the incident, mitigation actions taken and current outcome. Completed paperwork shall be submitted to the EMS Chief, DES Director, County Safety Officer and/or volunteer leadership as applicable.

iii. EMS Operations Chief / Volunteer Station Leadership

- Review incident and actions taken.
- Determine the need for additional actions needed to accommodate personnel to include station relocation.
- A written memo shall be sent to all applicable personnel / station leadership and the Director of Emergency Services detailing the incident and the remediation actions and procedures that have been taken and put into place.
- EMS Operations Chief shall notify the President of the IAFF Local 4658 should the incident involve or effect a station that houses career personnel.
- Stations and personnel shall be kept informed of the mitigation process. Once the infestation has been eradicated and certified as clean per the pest control company, notification shall be made via memorandum to all personnel and parties involved. Personnel scheduled to return to the affected station during the next shift shall be notified by telephone.

j. Facility Monitoring & Cleaning

The cleanliness of Fire / Rescue facilities is paramount in the prevention of parasite infestations. This is best accomplished when the station is cleaned and inspected on a daily and weekly basis.

i. Daily requirements

- It is recommended that the floors of living areas be cleaned appropriately each day.



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- If in place, bed bug traps / interceptors shall be checked daily. If bed bugs are observed, refer to item four (4) of the procedure section of this policy for further direction.
- Mattress / box spring encasements shall be inspected for rips/tears or evidence of bed bug infestation (rust colored spots, dark spots, bed bug exoskeletons).

ii. Weekly requirements

- In addition to the aforementioned daily requirements, all bunkroom / dayroom furnishings shall be vacuumed and wiped down at least once a week. This will include all couches, chairs, beds, and bed frames.